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## OFFICE OF TRAINING AND EDUCATION LONG-RANGE PLAN

## I. Office of Training and Education (OTE) Long Range Plan Synopsis

The resource problems of the past and the present are beginning to impact on the future. The future themes outlined in all Phase III Planning Papers forecast grave consequences for the OTE if the current resource trend does not change. Even though efforts are being made to alleviate future problems for OTE through the mechanism of supplemental support packages tied to future Agency growth, the Office finds itself looking at another come-from-behind situation. If OTE is to respond to future growth in training requirements it has to prepare now. With the exception of operations training methods, OTE's programs will need significant updating to deal with future change. We must begin today to develop the capability to deal with the training requirements of the future, while responding to the heaviest training demands in our history.

The Agency of the future will continue to be populated by specialists performing highly differentiated functions, while the need for collaboration in decision making and problem solving will increase. Automated systems may hold the key to improving the necessary internal communications and information sharing process. Even though they will be simple to operate, these systems will fail us if we are not able to change as an organization to enable us to use these systems to their design potential. This change will produce requirements to train our clerical employees to assume a totally new role and at the same time to train our leaders to exploit the systems. This transition into the age of automation will cause many organizational problems. One step that must be taken now to reduce these problems is to integrate OTE into the planning process throughout the Agency. Only by taking this action today can the Agency expect OTE to meet its requirements in the future.

## II. OVERVIEW

## A. Major Concerns of the Past Several Years

Throughout most of the past decade the Office of Training and Education (OTE) has been absorbing new requirements into existing resources. The result has been a struggle to maintain an increasing level of training in relation to a growing Agency and expanding requirements. In the more recent past, the last three years, OTE has begun to put forward new initiatives in training to respond to Agency requirements. The resource strategy has been to request increasing resources to alleviate the limitations of classroom and conference space; funds to recapitalize existing facilities and equipment; additional positions to deal with new requirements for all OTE components and for language and operations training in particular; and additional staff to enable instructors to develop new methods and techniques. The outcome of the budget call for OTE has continued to put the Office in a situation of having to make due with limited resources while hoping for end of year funds to get a step ahead of the demands for training and employee development.

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## B. Current Major Issues

The major issues in OTE's current operation continue to be those described in the preceding paragraph. While adequate facilities, services and equipment continue to be a general resource problem, some training requirements demand immediate attention and support if the Agency is to make the transition through the growth projected in the next ten years. These specific, critical requirements range across the OTE training spectrum: language training, information handling, training in covert action and counterintelligence, training for analysts, the development of management skills, and perhaps the most important requirement, to prepare the clerical employee to perform in the automated office environment.

## C. Future Directions

What will OTE have to do in the next 10 years to continue to meet the Agency's training requirements? The future directions and success of the training mission will depend on the degree with which training is integrated into every ongoing activity and the planning of all future initiatives. In a variety of areas OTE will seek to achieve diverse yet complimentary goals. At the same time that training objectives must become more focused to satisfy specific requirements, broader educational objectives will be necessary to deal with employee professional development. While more areas of training may become decentralized to the point of becoming component conducted training, some areas for management and executive development will become more centralized and come under stronger control.

The role of change agent for the Agency will be properly assumed by OTE in the next decade as the value of training becomes more important in dealing with the rapid changes we will experience in our workforce and the environment in which we work. A larger diverse workforce in an automated setting will require changes and standardization in the way we communicate and make decisions. Our Agency culture will place more value on collaboration and will have to learn and institutionalize the process. Management analysis of jobs and their organizational relationships will become increasingly important along with the process of selection of employees to fill the positions. The role of OTE will include making available process consultants and facilitators to assist Agency line managers in applying concepts such as decision analysis. We have already demonstrated the value of this particular service in some specific instances in providing assistance to the Directorate of Operations, the Directorate of Intelligence and the Intelligence Community,

The profile of OTE's offerings will change considerably with more offerings of specialized and shorter programs available in all areas including language instruction, where the demand for intensive "survival" programs will increase. Other changes in foreign language instruction will include the adoption of computer assisted instruction (CAI) and the possible development of the capability to train students in an overseas environment on a tutorial basis.

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We will see an increased need for rotational officers to fill training positions with specific content expertise, and an increased need for MT careerist to seek experiences through rotational assignments throughout the Agency. The use of external experts, consultants and guest speakers will also increase along with the attendance of Agency personnel in external training programs. OTE will play a role in helping identify and evaluate these external training resources and insure their sponsorship is legal and appropriate to Agency requirements.

Perhaps the most important organizational change that will take place to influence the training curriculum will be the enhancement of the Curriculum Committees' review process and the directorate Senior Training Officer (STO) network. A primary goal will be to place senior MT Careerists in the STO positions.

While OTE in general will see extensive changes in its training process one significant area will experience minor changes. This area is the area of operational training where the volume of training will increase and some of the tools used by the case officer will change, but the methods of training which have been tested and proven through the Agency's history will not change significantly.

### III. Phase III Planning Papers

The impact of the Phase III Planning Papers on the Office of Training and Education (OTE) in particular and the training of Agency employees in general will be a significant event in OTE's history. One of the Agency's concerns will be to bring employees onboard and get them to a productive level as fast as possible. The selection of training methods and programs for these employees will be almost as important as the selection of the employees themselves. To meet the resulting training requirements OTE will build programs that have long term application and contract out for short term requirements. To meet some specialized requirements OTE will decentralize some of its training programs and conduct them much in the fashion of component training.

The training requirements of the Agency will cause a need for change within OTE. Significant changes will occur in the manner we design and deliver our product as well as in the tools that we use. This change will also influence our career service in the same way the Agency workforce will be effected in the next decade. Instructors and employees in general will find that some of their skills are less than adequate if not obsolete. Training will play a role in dealing with this change by retraining employees for new jobs and training managers to deal with employees that feel trapped in the career squeeze. In order to accomplish the objectives of such a role OTE will have to be included and become more involved in the planning stages of all Agency programs and projects which will change our work environment. A training profession with unique standards for control will develop and will be closely allied with the Agency's top levels of leadership and their management strategy.

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## IV. Resource Requirements

The most important resource requirement to enable OTE to serve the Agency adequately in the future is the need for more and better qualified personnel. The numbers of training staff to be added as projected in the supplemental support packages will probably be sufficient, but the timing for increasing the number of instructors is wrong. We need the personnel now before the Agency grows. The capability to deal with future requirements must be developed today and the present day staff is fully extended meeting current needs and is unable to allocate time for new systems development.

The space requirements that have plagued OTE in the past will not disappear but will probably become minimized as some of our product becomes decentralized and we make the transition into the automated age. The cost of purchasing new equipment such as interactive terminals and more important the cost of developing training software will become a significant resource requirement.

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Agency Long-Range Planning  
Phase IV--Support Capabilities  
SUBJECT: Training for Information Handling

1. Information Handling training in the years 1982 - 1992 will be quite different from what it has been in the past. In order to understand these differences, the "who," "what," "why," "where," "when," and "how" of training must be considered.

2. A dozen years ago the only CIA employees who received computer training were those few who were computer professionals. Today, the VM user population is approximately 25 percent of the Washington, D.C., agency employees. Over the next ten years this is forecast to grow to approximately 90 percent to 95 percent of the Headquarters employees. During this decade almost all Agency employees will have to become familiar with information systems.

a. Initially, the secretary will use Wang or other word processors for fairly standard typing operations. However, in a very few years the emphasis on electronic mail, file handling, electronic printing, etc., will cause the secretary to need a variety of information handling skills. By this time many of the word processors will be connected to mainframe computers. It is likely that in the future the secretary will spend proportionately less time than now typing and more time managing office resources.

b. The analyst and desk officer will also, in many cases, receive their introduction to information handling in the area of word processing. In this case the user is the originator of the document. Over the next several years this use will increase as users determine that word processing is easier and quicker than alternative ways of putting ideas on paper. This will be even more true as voice input, word processors become widely available by the end of this period. Over the next five years there are plans to bring electronic cable dissemination to the desks of most DDI analysts and DDO desk officers. Large database retrieval will also become more popular. For some analysts, statistical analysis, modeling, and graphic presentation will become more important than it has been in the past.

c. Currently, operational personnel make almost no use of information systems. With the advent of CRAFT, operational personnel will almost universally have to learn how to use this office automation tool.

d. Staff support personnel will make some use of word processing, electronic mail, intelligence databases, and so on. However, their major use will probably be special purpose systems supported by databases. Some systems of this type already exist in finance, logistics, security, and communications.

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e. Most management, and especially top management, do not currently make frequent, direct use of information handling systems. Generally, they prefer to use such systems indirectly through staff personnel. They feel this is a more efficient use of their time. With today's systems, they are generally correct. As new systems are developed which are more natural to use, managers may be more willing to use systems themselves. Direct use of computer systems by managements helps to overcome the communication problem that sometimes exists with support personnel. It also reduces the unwanted screening/filtering effect of the staff. Initially, major use of information systems will be to receive electronic cables and mail and to perform selective database searches. As effective decision support systems are developed, higher-level management will find it easier to do long range planning and gaming.

3. A dozen years ago computer training emphasized programming languages. Today, OTE data processing training emphasis is on low-level systems such as SCRIPT, RAMIS, GIMS, AIM, etc. In the future the emphasis will be on high-level systems. There are not now, nor will there ever be, a sufficient number of programmers to write programs for all requirements. As current low-level systems are fairly easy to use, we are addressing the problem by teaching the users how to program. In the future higher-level, nonprocedural language systems will be purchased and developed so that the user will be able to specify what they want but not have to specify how to achieve it.

a. Word processing training will be a major part of information handling training for many years. Word processing will be important as a stand alone topic and also as part of almost every new system in the Agency including SAFE, CRAFT, and CAMS. By 1992, terminals will have replaced typewriters on the desk of almost all personnel. Currently, there is a type of competition between the command type word processing SCRIPT and the visually oriented system Wang. In the end, the visually oriented system will win.

b. There will always be the need for some standard data processing training in topics such as computer programming languages, interactive systems, and conventional databases. However, the number of people requiring this type of training will decline significantly over the next few years. In ten years time only data processing professions will need this type of training.

c. There are a number of low-level systems that will continue to exist and/or expand cover the next ten years. These include CAMS II, SAFE, CRAFT, AIM, LIMS, etc. These systems let the user do a limited number of predefined operations. They require the user to have a fairly detailed level of training in how the system works.

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d. Currently there are very few graphic terminals in the Agency. This will change over the next decade. In many instances, one picture is worth more than a thousand words. Statistical analysis, information or material goods flow diagrams, organization charts, and briefing material all benefit from graphic representations.

e. Over the next ten years, a number of new, nonprocedural, visually oriented systems will be developed. Two existing precursors of these systems are the Wang word processors and some relational database management systems. These systems can be characterized as having the user tell the system what to do, but not how to do it. In many instances the user specifies what the results should look like. These systems will be natural to use. A user will be able to "guess" how to use the system. When the user makes an error, the system will provide immediate, relevant feedback about how the system should be used.

4. Information handling training will increase at least fourfold over the next decade. The major purpose of this Agency is to handle information. As the CIA is asked to do more with a less than concomitant increase in resources, it is necessary to use computer-based information systems to multiply intellectual power.

5. Traditionally, the majority of information handling training has occurred in a centralized Agency training facility. The demand for this type of training over the next ten years would require most of the Chamber of Commerce Building to be dedicated to information handling training if this pattern were continued. While information handling training will have to expand significantly in the CofC building, it will also be necessary to find other innovative ways to accomplish this training.

a. More information handling training should occur in the vendor's facilities than has been true in the past. Wang has devoted four classrooms to Agency word processing training. In the future, a number of information handling tools will be "off-the-shelf" items from a vendor. Other governmental and commercial organizations have need of information handling tools similar to our own. In the past there has been too much of the "not-invented-here" syndrome. Over the next ten years a far larger percentage of the software used in the CIA will be standard (or almost standard), commercially available packages. In many instances the training for this type of package can be better provided by the vendor. Other types of general training, such as a computer language or information handling concepts, can be effectively and efficiently provided by general providers of education such as the Office of Personnel Management and universities.

b. In the next several years, training will more often occur in the office. Some of the training will be OJT after a formal course. In this case the training may be conducted by the component office and



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may emphasize the particular way a system or package is used by the office. As more terminals become available in various offices, it may be more cost effective to bring the formal training to the student. Courses could be held for three hours a day in an office. This would save transportation time between the office and class. It would permit the students to conveniently accomplish a half day of work. It would reduce the demand for classroom space. In many instances the employee will use self-study material to master this material. Self-study material is appropriate when: (a) there are insufficient classroom resources, (b) the student will learn better at his own pace, (c) it is difficult for the student to leave his office setting, and (d) it is difficult to gather sufficient students to make a course cost effective. In some cases the self-study material will be Computer Assisted Instruction (CAI). Since almost every employee will have convenient access to a terminal, it will be easier than it is now to present information in this fashion.

c. Information handling training will be conducted by both OTE and by the component, depending on circumstances. Agency-wide systems will probably be taught primarily by OTE personnel. However, the presence of a specialist from an appropriate component to assist the OTE instruction with instruction would be best. Systems used only by one office will probably be taught by that office.

6. In the coming years, training will be more of an on-going activity. It may be necessary to provide a sizable amount of information handling training as part of EOD training. If an analyst, secretary, or manager must be able to use one or several systems in order to perform a job, it will be necessary to provide training as soon as an employee joins the Agency. One thing constant about information handling is change. New and better systems will continue to be developed. The CIA employee will have to expect the necessity for periodic retraining in these procedures throughout his career. In CAMS, users are brought in for refresher and updating training every two years. It is expected that the same pattern will be required for SAFE and for other systems.

7. Information handling training will be presented in a number of different modes over the next decade. These will include formal classroom instruction, OJT, self-study with conventional materials, and CAI. In some cases a mode will be chosen because of resource limitations. In other cases it will be selected because it is the most effective. In still other cases, a mode will be chosen because of student preference.

a. Formal classroom instruction will continue for the foreseeable future. It is especially useful when the material needs to be taught to only a limited audience, which can be gathered together. It is useful when group discussions are especially important. It is good when a student is first learning some material and has limited

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confidence in his own ability. Formal classroom instruction is expensive in terms of instructors and facilities. Fairly long-term planning must occur to insure the required resources are available for a class.

b. On-the-job training is useful to reinforce what has been learned elsewhere. It is useful to tailor the material to the way a particular group uses a system. On-the-job training is often so unstructured that the student benefits more by luck than by proper training.

c. Self-study will be a vital part of information handling training in the future. It permits the student to learn at his own pace. In many instances it permits the student to learn at a location of his own choosing. This location may be the employee's office; it may also be the employee's home. A large part of information handling training is unclassified. Therefore, employees might study career enhancing material at home on their own time. CAI is a very powerful, albeit expensive tool. IBM estimates that it takes from 100 to 300 hours of course preparation time for every hour of student contact time. This suggests that CAI is most useful for high student volume courses. These courses are most frequently courses for new users. New users most frequently need a great deal of human "hand holding" to get started. This problem might be overcome by having a central CAI training facility where users have ready access to a human instructor.

Agency Long-Range Planning

Phase IV--Support Capabilities

SUBJECT: Alternate Methods to Accelerate the Number of  
Language-Qualified Employees

1. Over the coming decade, the Language School will become highly automated as we move into word processing and computer assisted instruction (CAI). Expanded application of CAI techniques will enable instructors to focus their attention on the more creative aspects of teaching and program development, and drills and reinforcement exercises will be studied using CAI programs. This will enhance the efficiency of instructors and enable the School to train increasing numbers of students without a concomitant increase in staff. The Language School is already working with the Information Science Center to expand an in-house CAI system, and in cooperation with ORD, is exploring the possibility of assistance from the commercial and academic world. Those efforts will continue through the 1980s.

2. The planned adoption of computer techniques to test scoring using optical character readers and mark sense readers will increase the speed and accuracy of our testing procedures and allow us to more easily determine both the effectiveness of our training and the quality of the Agency's foreign language inventory at any given time.

3. Throughout the next decade the Language School will continue to experiment with types and lengths of language programs, offering increased numbers of both short minimal survival courses and total immersion programs of several weeks' duration. New instructional techniques will be tried and the use of audio and visual aids to supplement classroom instruction will be expanded.

4. Efforts to direct course curriculum to the specific needs of Agency students will continue through familiarization of instructors with the tasks required of operations officers and analysis of the Language Use Questionnaire which gathers information about language use overseas.

5. The results of research into the relationship of language aptitude to learning success and optimal course length to attain professional proficiency will become available during the next several years, and we may see selectivity in accepting students and some changes in the design of language programs.

6. The Language School's role in the development of a standardized method for oral proficiency testing will indirectly contribute to an increase in language qualified employees in the Agency. The adoption of these standards nationally will regularize and improve language teaching in high schools and colleges and provide a better trained pool of individuals with language skills from which to recruit new employees for the Agency.

SUBJECT: Alternate Methods to Accelerate the Number of  
Language-Qualified Employees

7. The Language Incentive Program which provides monetary reward for language use, achievement and maintenance will be continued since all evidence indicates that it is having a positive impact on the Agency's language skills inventory. The program will be reviewed and adjusted during the coming years to assure that the intent of the program is being realized.

8. Finally, the professional qualifications of the Language School staff will be augmented by continued participation in the activities of professional associations and through expanded in-house training programs.